CLAIMS

1. A radiation therapy device, comprising

a source carrier arrangement carrying radioactive sources;

a collimator body comprising collimator passages for directing radiation emanating from said sources toward a substantially common focus, each collimator passage having an inlet for receiving said radiation;

c h a r a c t e r i z e d in that at least a subset of said sources is linearly displaceable relatively to at least a subset of said collimator passage inlets, or vice versa, thereby enabling a change of spatial dose distribution surrounding said focus.

2. The radiation therapy device as claimed in claim 1, wherein said collimator body and at least a portion of said source carrier arrangement are linearly displaceable relatively to each other so as to cause the positions of said subset of sources and the positions of said subset of inlets to be displaced relatively to each other.

3. The radiation therapy device as claimed in claim 1 or 2, wherein said source carrier arrangement comprises at least two segments, each segment carrying a subset of said sources and being individually linearly displaceable.

4. The radiation therapy device as claimed in claim 3, wherein each subset comprises at least one row of sources which are jointly placeable in register with collimator passage inlets aligned in a corresponding row, and which are jointly removable from said inlets, by displacement of a segment.

5. The radiation therapy device as claimed in claim 4, wherein said collimator body comprises several

parallel rows of collimator passage inlets, at least one of said rows being associated with collimator passages that direct toward said focus radiation beams of a different cross-section than radiation beams directed by collimator passages associated with the other rows.

6. The radiation therapy device as claimed in claim 5, wherein each segment is displaceable in a direction substantially perpendicular to and intersecting said rows of collimator passage inlets.

7. The radiation therapy device as claimed in claim 6, wherein said collimator body comprises:

a first set of rows of collimator passage inlets associated with collimator passages that provide radiation beams of a first cross-section;

a second set of rows of collimator passage inlets associated with collimator passages that provide radiation beams of a second cross-section; and preferably

at least a third set of rows of collimator passage inlets associated with collimator passages that provide radiation beams of a third cross-section;

wherein any row from one of said sets has, as its closest neighbour, a row from at least one of the other sets.

8. The radiation therapy device as claimed in claim 7, wherein said subset comprises a plurality of rows of sources which are arranged to be simultaneously placeable in register with collimator passage inlets from one of said sets, said plurality of rows of sources being simultaneously displaceable so that the sources of at least one of said rows of sources avoid being in register with collimator passage inlets.

9. The radiation therapy device as claimed in any one of claims 1-8, wherein each one of said source

carrier arrangement and said collimator body has a cross-section of at least an arc of a circle, preferably an entire circle, along which said sources and said collimator passage inlets are distributed, wherein said subset of collimator passage inlets and said subset of sources are linearly displaceable relatively to each other in a direction substantially perpendicular to said cross-section.

10. The radiation therapy device as claimed in any one of claims 1-9, wherein, in a Leksell x-,y-,z-coordinate system, said subset of collimator passage inlets and said subset of sources are linearly displaceable relatively to each other essentially in parallel to the z-axis.

11. The radiation therapy device as claimed in any one of claims 1-9, wherein at least a portion of said source carrier arrangement has an envelope surface shaped substantially like a frustum of a cone.

12. The radiation therapy device as claimed in claim 11, wherein, in a Leksell x-,y-,z-coordinate system, said subset of sources are linearly displaceable at an angle of 0-45°, such as 5-25°, preferably 10-15° to the z-axis.

13. The radiation therapy device as claimed in claim 3 or any one of claims 4 - 12 in combination with claim 3, wherein each segment comprises or is connected to a respective actuator, preferably comprising an arm, for controlling the displacement of the segment, wherein the direction of displacement is preferably along the longitudinal axis of the actuator.

14. A method of changing the spatial dose distribution surrounding a focus toward which collimator passages direct radiation emanating from radioactive

sources carried by a source carrier arrangement of a radiation therapy device, each collimator passage having an inlet for receiving said radiation, c h a r a c t e r i z e d by linearly displacing at least a subset of said sources relatively to at least a subset of said collimator passage inlets, or vice versa.

15. The method as claimed in claim 14, comprising linearly displacing at least a portion of said source carrier arrangement relatively to a collimator body having said collimator passages, thereby causing said subset of sources to be displaced relatively to said subset of collimator passage inlets.

16. The method as claimed in claim 15, comprising displacing said portion so that the sources are moved from a position in which they are in register with collimator passage inlets to a position in which they are not in register with collimator passage inlets.

17. The method as claimed in claim 15, comprising displacing said portion so that the sources are moved from a position in which they are in register with inlets to collimator passages of a first size to a position in which they are in register with inlets to collimator passages of a second size.

18. The method as claimed in any one of claims 14 - 17, wherein the sources are displaced essentially in parallel to the z-axis in a Leksell x-,y-,z-coordinate system.

19. The method as claimed in any one of claims 14 - 17, wherein the sources are displaced in a direction having an angle of 0-45°, such as 5-25°, preferably 10-15°,relatively to the z-axis in a Leksell x-,y-,z-coordinate system.